Insect Pest Management Potential of Cottons Produced in Narrow-Row Short-Season Cultures in the Irrigated Far West

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ABSTRACT

Short- and long-season cotton, Gossypium spp., cultivars and selections were grown in narrow-row culture in the Imperial and San Joaquin Valleys of California. Acceptable cotton yields of over two bales per acre were obtained. All of the seed cotton was harvested prior to September 1 in the Imperial Valley and prior to October 11 in the San Joaquin Valley. The data indicate that early harvests have the potential to escape late-season insect infestations and may be an effective component of cotton integrated pest management systems in the Southwest.

KEYWORDS: Insect pest management, narrow-row short-season cultivars, cotton cultivars, seed cotton, insect infestations, harvest dates, cotton integrated pest management systems, Southwest, Imperial and San Joaquin Valleys, cultural practices, pink bollworm, insecticides, nitrogen (ammonium sulfate), miticide, diapause, overwintering, production management systems, fiber property measurements, maturity.

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INSECT PEST MANAGEMENT POTENTIAL OF COTTONS PRODUCED IN NARROW-ROW, SHORT-SEASON CULTURES IN THE IRRIGATED FAR WEST

By V. T. Walhood, T. J. Henneberry, L. A. Bariola, D. L. Ballard, and C. Brown[1]

INTRODUCTION

The development of cotton (*Gossypium* spp.) types and cultural practices that result in early fruiting with determinate growth characteristics are recognized, effective methods of reducing damage from late-season insect infestations (Hunter *1911*).[2] Cotton production systems in the Lower Rio Grande Valley, Tex., involving two early insecticide treatments for boll weevil (*Anthonomus grandis* (Boheman)) and short-season cultivars (130 to 140 days planting to maturity), resulted in below economic thresholds of boll weevil and tobacco budworm (*Heliothis virescens* (F.)) for an average of 59 days after the last insecticide application (Heilman et al. *1977*). Furthermore, lint yields were equal to or greater in plants grown in a short season with four less insecticide applications for boll weevil control than lint yields in plants grown in the conventional full season.

Other studies in Texas indicated that cotton grown in short seasons partially escaped late-season bollworm (*Heliothis zea* (Boddie)) infestations and avoided adverse August harvest conditions (Heilman and Namken *1974*; Larson et al. *1975*; Namken and Heilman *1973*). In Arizona, however, yields were reduced when cottons were grown in a short season in conventionally spaced rows (B. B. Taylor, personal communication). Wilson et al. (*1981*) found that certain early breeding stocks and cultivars grown in conventionally spaced rows yielded more lint by mid-September than long-season cultivars did by mid-October at Tempe, Ariz.

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[2]The year in italic, when it follows the author's name, refers to Literature Cited, p. 6.

The pink bollworm (*Pectinophora gossypiella* (Saunders)) is a late-season cotton pest in Arizona and the Imperial Valley of southern California (Watson and Fullerton *1969*). It has not become established in the San Joaquin Valley of north central California where 1.5 million acres of cotton are grown, although each year native pink bollworm moths migrate to the area from southern desert cotton growing areas (Stern and Sevacherian *1978*). The authors indicated that the pink bollworm may not be as damaging a pest to cotton in the San Joaquin Valley; however, pest management systems need to be developed to reduce populations in areas where the pink bollworm is established and to reduce the potential of spread to the uninfested areas.

Under full-season cotton production systems in Arizona and southern California, the crop often remains in the field for 10 to 12 months (Willet et al. *1973*). Cotton fruiting continues until frost. Pink bollworms develop in late-season bolls that do not mature but serve as host material to produce high overwintering populations that infest the crop the following year.

Walhood et al. (*1981*) reported that a short-season cultural system involving conventional long-season cultivars, grown in narrow rows (two rows about 14 inches apart on beds spaced about 40 inches apart), and early July termination of irrigation resulted in an early maturing cotton crop in the Imperial Valley with harvests completed by the end of August. Cotton yields were over 3,566 lb of seed cotton/acre with no insecticides applied for insect control. Furthermore, early maturation of the crop avoided late-season pink bollworm infestations. Overwintering larval populations were reduced 75 percent and spring moth emergence was reduced 86 percent.

These results stimulated an evaluation of plant growth and yield of short-season cotton selections and cultivars, as well as long-season cotton types grown in narrow rows, as potential types for culture under irrigated far western desert cotton-growing conditions of the Imperial and San Joaquin Valleys of California. This publication is a report of this research.

MATERIALS AND METHODS

Studies were conducted in 1978, 1979, and 1980 at the USDA Imperial Valley Conservation Research Center (IVCRC), Brawley, Calif., and at the University of California West Side Field Station (WSFS), Five Points, Calif. The soil type at IVCRC was Holtville clay loam and at WSFS a Panoche clay loam, both soils having a water holding capacity of about 12 to 16 inches in the top 59 inches of soil.

In the Imperial Valley, in 1978, the test plots were preplant irrigated and broadcast fertilized with 150 lb/acre of nitrogen (urea) prior to planting. Eighty-two selections and cultivars were planted on March 21 with two rows about 14 inches apart on beds spaced about 40 inches apart. Plots were four beds by 40 ft long and each was replicated four times. After emergence, plants were thinned to about 50,000/acre. Plots were irrigated on May 12, 30, June 8, 15, 22, 29, and July 7. A total of 24 inches of water was applied after planting. Seed cotton was handpicked at approximately 1-week intervals beginning on July 26 through August 24, 1978. Plant height was measured at time of final harvest.

Seed lots from the third harvest week were X-rayed for percentages of pink bollworm damage (Wilson and Wilson *1975*). No insecticides were applied to the plots.

In the Imperial Valley, in 1979, the plots were preplant irrigated and fertilized with 100 lb/acre of nitrogen (urea). Sixty-six selections and cultivars were planted on April 4 with two rows 20 inches apart on beds spaced 40 inches apart. Plants were thinned to about 40,000/acre. Plots were four beds by 40 feet long. There were four replications of each entry. Plots were irrigated on May 24, June 4, 15, 29, and July 13. A total of 20 inches of water per acre was applied. Insecticides were applied to replications 1 and 2. Seed cotton was picked at about weekly intervals beginning on Aug. 8 to 29, 1979. Heights of plants were measured after the final harvest. Flowering responses were made by counting white flowers on June 19 and 27. The fiber properties from each weekly harvest were determined at the Fiber Laboratory, U.S. Cotton Research Station, Shafter, Calif.

In 1978 at the WSFS, test plots were broadcast fertilized with 75 lb/acre of nitrogen (ammonium sulfate) prior to planting. Fifty-nine and 40 plant selections and cultivars were planted on April 19 and May 11, respectively, with two rows 14 inches apart on beds spaced 40 inches apart and replicated four times. The seed was planted in dry soil and irrigated for germination and emergence and to saturate the soil-root profile. Plots of both dates of planting were irrigated on June 26 and July 17 with a total of 10 inches of water. Seed cotton was handpicked three times (Aug. 31, Sept. 22, and Oct. 9 for Apr. 19 planting; Sept. 13 and 27 and Oct. 11 for May 11 planting). Fiber analyses from samples of the combined total harvest were made at the Fiber Laboratory. A miticide was applied once.

In 1979 at the WSFS, the test plots were broadcast fertilized with 75 lb/-acre of nitrogen (ammonium sulfate) prior to planting. Sixty-three selections and cultivars were planted with two rows 20 inches apart on beds spaced 40 inches apart and replicated four times. The seed was planted in dry soil and irrigated on April 20 for germination and emergence, and to saturate the soil-root profile. The plots were irrigated June 21 and July 20 with a total of 11 inches of water. Plant heights and stand counts were made at time of harvest. Seed cotton was handpicked twice. Fiber properties from the total harvest were measured at the Fiber Laboratory. A miticide was applied once.

In 1980 at the WSFS, the test plots were broadcast fertilized with 50 lb/-acre of nitrogen (ammonium sulfate) prior to planting. Ninety-eight selections and varieties were planted on April 25 with two rows 20 inches apart on beds spaced 40 inches apart. The seed was planted in dry soil and irrigated for germination and emergence, and to saturate the soil-root profile. The plots were irrigated on June 11 and July 17 with a total of 11.4 inches of water. Three sequential harvests were made and fiber analysis of the lint from the total harvest was made at the Fiber Laboratory. One insecticide treatment for lygus control was made on June 11.

RESULTS

Imperial Valley Conservation Research Center (IVCRC), Brawley, Calif., 1978, 1979

Plant heights ranged from about 20 to 44 inches and 20 to 41 inches, averaged over all entries about 27 and 28 inches in 1978 and 1979, respectively (tables 1 and 2).[3] The average yield of seed cotton (overall entries) in 1978 was 3,653 lb/acre (about 2.4 bales of lint) and 3,227 lb/acre in 1979 (about 2.1 bales of lint) with all cotton produced being picked by late August in both years. Over 60 and 54 percent of the entries produced 3,600 and 3,200 or more pounds of seed cotton in the narrow-row, short-season cultural systems, respectively, in 1978 and 1979.

Standard measurements of fiber properties are shown in table 3.

University of California, West Side Field Station (WSFS), 1978, 1979, 1980

In 1978, 1979, and 1980, 40 to 98 commercial cultivars and/or advanced breeding cotton types were grown under narrow row cultural systems in the San Joaquin Valley (tables 4, 5, 6, and 7). Seed cotton yields ranged from 2,518 to 4,614 and 1,731 to 3,806 lb/acre of seed cotton for early (Apr. 19) and late (May 11) planted cotton, respectively, in 1978; 1,927 to 3,662 in 1979; and 2,109 to 3,272 in 1980. Average seed cotton yields of all entries tested in 1978, 1979, and 1980 were 3,215 (Apr. 19 planting) and 2,415 (May 11 planting), 2,690 and 2,632 lb/acre, respectively. Total harvests of all cotton produced were finished in all years between September 17 and October 11. Standard fiber property measurements are shown for all entries.

DISCUSSION

As many as five generations of the pink bollworm may develop in a cotton-growing season in Arizona and southern California (Slosser and Watson *1972*). Overwintering (diapause) larvae begin to appear in early September, and high numbers occur by October with 99 percent of the diapause population developing in bolls after September 15. Considerable research has been focused on developing technology that prevents the development of the diapause generation or induces high mortality of the overwintering larvae (Adkisson *1962*; Rice et al. *1971*; Kittock et al. *1973*; Bariola et al. *1976*; Watson et al. *1978*; Watson *1980*).

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[3]All tables follow the text, beginning on p. 9.

In this series of studies, both long-season and short-season cottons grown in narrowly spaced rows produced acceptable yields of seed cotton before the occurrence of the major portion of the diapausing pink bollworm generation in the Imperial and San Joaquin Valleys of California.

In 1978, seed damage in bolls of equivalent age caused by pink bollworm larvae ranged over all plant entries from 2 to 31 percent and was generally greater in the bolls of later maturing cottons. Some of the entries may have some degree of resistance; however, Wilson et al. (*1979*) reported that seed damage by pink bollworm has usually been lower in early maturing cottons, presumably because of escape from exposure to high density moth populations.

While total yields of long- and short-season cottons may have been acceptable, the earlier maturing entries demonstrated other potentials relating not only to late-season insect control but to the practicality of short-season systems. For example, in the Imperial Valley in 1978, when the average amount of cotton harvested by August 1 for all entries was 47 percent and average seed cotton yield was 1924 kg/ha, several entries were 70 percent or more open and averaged 2607 to 2980 kg/ha of seed cotton. Similarly, in the San Joaquin Valley on August 20, 1979, when average amount of cotton open for all entries was 32 percent and seed cotton yield was 967 kg/ha, several entries had 55 percent or more of the crop open (1852 to 2130 kg/ha of seed cotton) and one entry had 84 percent of its crop open (3019 kg/ha of seed cotton) for harvest. Hence, even in the San Joaquin Valley, with its later season than the Imperial Valley, an incorporation of early maturing cottons into a narrow-row culture would essentially eliminate the pink bollworm problem due to lack of feeding and overwintering sites for the insects.

In the Imperial Valley, the fiber properties were measured for each of the sequential harvests and generally followed the expected trend for better fiber properties from earlier set bolls. Generally, it was found that the earlier maturing entries maintained their fiber properties throughout harvest better than later maturing entries. This situation likely resulted from the impact of the early final irrigations. A greater proportion of the fruit had developed before soil moisture stress imposed growth restrictions on the fiber cells. The early termination of irrigation in the San Joaquin Valley had a similar increasing deterioration effect on fiber properties of later maturing entries.

The practical application of a short-season cotton production system was shown in previous studies (Walhood et al. *1981*), which demonstrated that conventional long-season cultivars grown in narrow-row culture also produced an early maturing crop and reduced overwintering pink bollworm larval populations. Increasing costs of cotton production and intensified late-season cotton insect problems indicate the need for production management systems that more efficiently produce acceptable yields and economic returns. Similar problems in the Rio Grande Valley, Tex., stimulated studies to evaluate an integrated short-season management system for cotton production in that area (Heilman et al. *1979*). Early maturing cultivars integrated with selective insecticide use and efficient water management produced 736 lb/acre of cotton lint as compared with 598 lb/acre produced by long-season cultivars. The production cost advantage for the integrated short-season production system was $0.18/lb of cotton lint produced.

The results of the present study demonstrated that short-season cotton breeding stocks and cultivars, as well as long-season ones, may be adapted to narrow-row cultures to accomplish similar, more efficient production systems in certain irrigated western cotton growing areas. Further research is needed to determine costs of production and returns in long- and short-season growing systems, as well as to better define water relations, fertilizer requirements, and other cultural practices that will optimize short-season, narrow-row production management systems under those conditions.

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Table 1.--*Cotton cultivars and selections, plant height, seed cotton yield, maturity responses, and pink bollworm (PBW) seed damage*[1] *in 14- to 26-inch-row short-season production system at the Imperial Valley Conservation Research Center, Brawley, Calif., 1978*

Cultivar or selection	Plant		Accumulative seed cotton yields and percent harvested										PBW seed damage
	Height	Population	July 26		Aug. 1		Aug. 8		Aug. 15		Aug. 24[2]		
	Inches	*Thousands per acre*	*Pounds*	*Percent*	*Pounds*	*Percent*	*Pounds*	*Percent*	*Pounds*	*Percent*	*Pounds*		*Percent*
Acala SJ-2	37.8	45	537	14	1,295	33	2,529	64	3,546	90	3,960		23
Acala SJ-5	29.5	56	487	13	1,485	40	2,292	62	3,388	91	3,707		23
Acala N.M. 288	28.3	56	916	25	1,855	51	2,775	77	3,471	96	3,608		16
Acala N.M. 1517 E1	32.3	54	866	23	1,810	48	2,769	72	3,515	94	3,738		5
Acala N.M. 1517 E2	44.1	44	278	7	1,247	31	2,410	60	3,797	95	4,015		-
Cascot BR-1	22.4	56	1,249	33	2,447	65	3,242	84	3,685	98	3,769		7
Cascot BR-2	21.3	54	951	24	2,249	57	3,134	80	3,665	94	3,192		6
Cascot L-7	25.2	52	802	23	1,667	47	2,700	76	3,315	94	3,535		8
Coker 310	28.0	59	581	15	1,529	40	2,374	62	3,502	92	3,822		11
Coker 3113	26.4	47	471	13	1,137	31	2,117	57	3,322	89	3,718		9
Coker 74-118	28.0	61	233	8	676	23	1,293	43	2,533	85	2,980		2
Delcot 277	29.9	53	830	27	1,850	61	2,603	86	2,883	95	3,020		3
D&PL 61	33.1	60	93	2	905	23	1,883	48	3,361	86	3,914		17
D&PL 703-146-22	26.0	55	189	5	1,236	32	2,459	64	3,590	93	3,872		13
D&PL 703-146-22-23-3	29.9	54	256	7	1,242	32	2,474	64	3,500	91	3,852		7
D&PL 712-22-33-43	28.7	56	269	6	1,198	26	2,454	53	4,156	90	4,604		11
D&PL 728-310-41-51	22.8	53	410	11	1,238	32	2,143	56	3,480	91	3,832		6
D&PL 728-315-43	24.0	64	678	18	1,764	48	2,672	73	3,456	94	3,665		8
D&PL 728-326-42	24.4	46	767	19	2,084	50	3,414	82	4,010	97	4,139		3
Dunn 118	26.4	49	436	11	1,573	40	2,749	69	3,599	91	3,958		3
Dunn 119	27.6	53	474	11	1,564	37	2,709	64	3,973	94	4,247		5
Dunn 120	29.1	54	394	11	1,377	39	2,480	70	3,260	91	3,568		14
Dunn 219	28.3	53	352	9	1,381	35	2,696	68	3,716	94	3,967		26
Dunn 224	26.0	52	381	10	1,566	45	2,612	75	3,258	94	3,474		4
Dunn 435	26.0	51	551	14	1,687	44	2,870	74	3,667	95	3,870		10
Lockett 77	27.6	46	628	15	1,733	43	3,015	71	3,993	94	4,264		9
Lockett 1140	22.4	42	1,097	33	2,249	68	2,927	88	3,170	96	3,308		4
Paymaster Dwarf	20.1	42	907	30	1,522	51	2,095	70	2,848	95	3,007		12
Paymaster 266	31.5	59	559	17	1,445	44	2,255	68	3,035	92	3,300		28
Paymaster 266-3	24.0	52	588	17	1,617	45	2,328	65	3,315	93	3,573		18
Paymaster 303	27.6	47	286	7	1,383	35	2,696	68	3,718	94	3,941		9
Stoneville 213	29.1	58	361	9	1,555	38	2,771	68	3,815	94	4,075		10
Stoneville 731N	32.7	54	159	4	1,544	38	2,621	65	3,610	89	4,044		3

See footnotes at end of table.

Table 1.--*Cotton cultivars and selections, plant height, seed cotton yield, maturity responses, and pink bollworm (PBW) seed damage*[1] *in 14- to 26-inch-row short-season production system at the Imperial Valley Conservation Research Center, Brawley, Calif., 1978*--Continued

Cultivar or selection	Plant		Accumulative seed cotton yields and percent harvested										PBW seed damage
	Height	Population	July 26		Aug. 1		Aug. 8		Aug. 15		Aug. 24		
	Inches	*Thousands per acre*	*Pounds*	*Percent*	*Pounds*	*Percent*	*Pounds*	*Percent*	*Pounds*	*Percent*	*Pounds*		*Percent*
Tamcot CAMD-E	19.7	59	1,584	44	2,551	70	3,403	94	3,573	98	3,634		4
Tamcot SP 21	29.5	56	458	12	1,637	44	2,692	73	3,427	92	3,711		12
Tamcot SP 21S	24.4	58	956	27	2,156	61	3,185	90	3,480	98	3,548		10
Tamcot ORC-IC-77	26.4	61	493	16	1,280	43	2,361	79	2,892	97	2,993		3
Weslaco 2-1-75	25.6	51	1,581	43	2,659	72	3,474	94	3,643	98	3,703		3
Weslaco 3-75	26.8	47	1,062	26	2,648	64	3,683	90	4,024	98	4,106		4
Weslaco 6-2-75	26.8	52	507	14	1,755	48	3,097	85	3,515	96	3,652		8
Weslaco 8-10-75	27.6	54	700	18	2,178	55	3,203	80	3,839	96	3,982		5
Weslaco 11-9-75	30.7	48	993	25	2,705	69	3,581	92	3,810	98	3,896		31
Weslaco 17-8-75	33.5	54	1,407	32	2,846	65	3,592	82	4,258	97	4,388		11
X Acala SS gs 1-2	16.5	50	438	16	1,313	44	2,112	71	2,780	94	2,962		5
X Acala SS gs 1-3	19.7	52	460	15	1,416	46	2,154	70	2,903	94	3,079		6
X Acala SS gs 1-4	19.7	56	678	23	1,692	56	2,372	78	2,888	95	3,037		8
X Acala SS gs 2-1	20.1	52	936	28	2,121	63	2,742	82	3,196	96	3,346		16
X Acala SS gs 2-2	21.7	51	1,009	30	2,266	66	2,987	88	3,293	97	3,412		11
X Acala SS gs 2-3	24.4	50	824	24	1,731	51	2,595	76	3,282	96	3,423		6
X Acala SS gs 2-5	24.0	50	747	21	1,855	51	2,667	74	3,377	93	3,615		9
X Acala SS gs 5-1	26.0	54	441	12	1,297	36	2,172	60	3,260	90	3,626		18
X Acala SS gs 5-2	28.0	54	599	15	1,606	40	2,760	69	3,819	96	3,993		5
X Acala SS gs 5-4	26.4	56	551	16	1,350	39	2,273	66	3,244	94	3,452		5
X Acala SS gs Sh	30.3	54	322	11	755	27	1,592	56	2,390	84	2,831		15
X Acala SS BRD	30.7	46	363	10	1,637	47	2,507	72	3,297	95	3,478		6
X Acala SS Cl 1	28.0	55	929	27	2,130	61	3,055	88	3,352	97	3,465		8
X Acala SS N9Y	31.9	50	934	24	2,167	57	3,088	81	3,645	95	3,826		9
X Acala SS Okra K2	26.0	56	586	15	1,736	45	2,643	69	3,601	93	3,857		19
X Acala SS Okra 14E	26.0	49	793	22	1,634	46	2,460	69	3,434	96	3,568		13
X Acala SS Okra 41-3	25.6	47	725	19	1,878	49	2,729	71	3,612	94	3,837		14
X Acala SS Okra 41-5	27.6	50	619	16	1,852	48	2,802	72	3,718	96	3,868		8
X Acala SS Okra 41-7	27.6	52	987	25	2,269	58	3,194	82	3,819	98	3,889		11
X Acala SS Okra 42-3	26.8	48	1,018	27	2,095	56	3,042	82	3,599	97	3,722		7
X Acala SS Okra 43-3-3	22.8	52	1,211	36	1,943	58	2,883	86	3,282	98	3,352		9
X Acala SS Okra 43-3-4	26.8	60	1,469	44	1,967	59	2,985	89	3,211	96	3,357		7
X Acala SS Okra 43-6-3	26.0	46	1,044	30	2,004	58	2,817	81	3,370	97	3,465		11
X Acala SS Okra 43-7-1	28.3	51	974	25	2,255	57	3,150	80	3,817	97	3,932		10
X Acala SS Okra 43-7-2	27.2	53	802	22	2,163	59	3,053	83	3,599	98	3,683		7

X Acala SS Okra 43-7-3	26.8	49	698	19	1,960	52	2,850	76	3,645	97	3,753	8
X Acala SS SB-7	22.4	52	1,368	40	2,350	69	2,894	85	3,297	97	3,414	11
X Acala SS 32	29.1	42	465	16	1,110	37	2,053	69	2,822	94	2,989	15
X Acala SS 55	26.0	45	247	9	1,066	37	1,720	60	2,610	90	2,887	27
X Acala SS 59	40.9	46	267	8	1,059	32	1,830	56	2,795	85	3,282	29
X Acala SS 78	28.3	43	643	16	1,654	40	2,863	70	3,890	95	4,112	15
X Acala SS 79	31.1	46	592	17	1,361	38	2,269	64	3,225	91	3,540	25
X Acala SS 94	28.3	41	244	7	936	26	1,914	54	3,101	87	3,568	21
X Acala SS 95	28.0	46	280	8	958	27	1,773	51	3,004	86	3,493	13
X Acala SS 111	31.5	43	407	11	1,370	36	2,498	65	3,555	93	3,828	15
X Acala SS 124	27.6	46	617	16	1,674	44	2,692	70	3,645	95	3,839	11
X Acala SS 126	28.7	40	792	18	2,053	46	3,308	75	4,264	96	4,430	13
X Acala SS 391	28.7	46	870	22	1,982	49	3,359	75	3,883	96	4,029	10
X Acala SS 6008	27.2	51	1,421	43	2,326	71	2,800	85	3,176	97	3,284	17
Means	27.2	51	685	19	1,715	47	2,665	73	3,443	94	3,653	11

[1]Means of 4 replications for each criteria measured.
[2]100 percent accumulative yield column.
Note: Dashes indicate missing data.

Table 2.--*Cotton cultivars and selections, flowering, plant height, seed cotton yield, and maturity responses*[1] *in 20-inch-row short-season production system at the Imperial Valley Conservation Research Center, Brawley, Calif., 1979*

Cultivar or selection	Plant		Flowers per 65-ft row on June--		Accumulative seed cotton yields and percent harvested						
	Height	Population	19	27	Aug. 8		Aug. 15		Aug. 22		Aug. 29[2]
	Inches	*Thousands per acre*	*Pounds*	*Percent*	*Pounds*	*Percent*	*Pounds*	*Percent*	*Pounds*	*Percent*	*Pounds*
Acala SJ-2	35.4	31	64	119	1,278	47	1,833	77	2,361	88	2,696
Cascot 5-77 gs	28.7	30	105	232	1,220	40	1,641	54	2,540	84	3,025
Cascot 13-77	24.4	32	56	144	2,425	70	3,002	87	3,314	96	3,448
Cascot 56-77	26.4	33	97	186	1,896	59	2,539	79	3,028	94	3,206
Cascot 58-77	26.0	34	115	239	2,500	68	3,187	87	3,526	96	3,676
Coker 304	28.0	39	108	213	1,471	45	2,165	67	2,971	92	3,239
Coker 310	27.6	36	95	213	1,626	49	2,415	73	3,053	93	3,291
Coker 3113	31.1	35	55	178	1,352	44	2,024	66	2,762	90	3,066
Coker 3114	30.3	37	91	197	1,172	36	1,811	55	2,919	89	3,280
Coker 801N	33.1	25	108	194	1,593	46	2,439	71	3,109	90	3,459
Coker 600B	29.5	34	130	249	1,685	46	2,403	66	3,291	90	3,639
Delcot 311	33.9	34	57	192	1,767	52	2,593	76	3,276	96	3,417
D&PL 70	25.2	39	59	182	1,066	36	1,877	64	2,637	90	2,945
D&PL 7120	29.1	33	61	148	672	21	1,425	45	2,544	81	3,141
D&PL 703-146-23-31	29.5	31	51	177	1,075	35	1,831	42	2,697	87	3,109
D&PL 712-22-33-44	24.4	32	51	160	1,249	40	2,033	64	2,925	93	3,160
D&PL 728-356-41-51	20.5	34	85	160	2,421	59	3,476	85	3,954	97	4,082
D&PL 729-379-42-53	27.2	30	72	206	1,694	46	2,494	67	3,424	92	3,712
Dunn 118	28.0	35	94	173	1,883	56	2,456	73	3,101	92	3,385
Dunn 119	27.6	34	74	189	1,711	54	2,224	71	2,856	91	3,144
Dunn 120	29.9	34	96	202	1,828	53	2,524	72	3,220	92	3,484
Dunn 219	25.6	26	50	141	1,652	47	2,357	67	3,187	91	3,515
Lambright gs F	29.1	24	16	57	348	19	522	28	1,425	55	1,850
Lambright gs N	26.4	30	48	96	751	29	1,204	46	1,913	74	2,597
Paymaster 145	31.9	26	73	144	1,696	58	2,293	73	2,905	93	3,123
Paymaster 303T	24.0	33	104	173	1,859	54	2,673	76	3,294	94	3,514
Paymaster 792	26.4	32	103	275	2,132	63	2,658	79	3,149	93	3,387
Paymaster 4298	23.2	34	134	245	1,859	55	2,322	69	3,029	89	3,377
Pioneer 77	26.4	31	155	194	2,028	58	2,784	80	3,308	95	3,500
Pioneer X168	26.0	28	67	211	1,947	55	2,705	77	3,328	95	3,520
Pioneer X7006	26.8	38	104	213	2,114	62	2,914	85	3,244	95	3,433
Stoneville 213	29.5	31	54	191	1,328	40	2,273	67	3,103	91	3,411
Stoneville 302	25.6	30	119	160	1,425	46	2,055	67	2,771	90	3,075
Stoneville 316	29.5	36	66	174	1,312	37	1,970	55	3,080	86	3,578

Stoneville 506	31.5	35	135	224	1,510	39	2,447	64	3,549	92	3,849
Stoneville 825	32.7	32	82	180	1,102	30	2,072	56	3,139	85	3,701
Stoneville 1688	29.5	26	44	172	912	26	1,868	53	3,035	85	3,559
Tamcot CAMD EE78	24.8	35	114	256	2,692	73	3,333	90	3,529	95	3,705
Tamcot SP 37A	19.7	28	90	225	1,326	50	2,033	77	2,454	93	2,641
Tamcot SP 21S	28.3	26	44	173	1,137	40	1,833	65	2,626	93	2,829
Tamcot ORSU 78	24.0	32	102	204	1,249	49	1,709	67	2,174	85	2,562
Tamcot Blank SU78	24.0	35	126	258	2,046	63	2,656	82	3,017	93	3,251
Weslaco 2-1-78	27.2	35	104	197	2,073	60	2,985	86	3,355	97	3,474
Weslaco 3-78	28.0	34	98	200	1,916	56	2,738	80	3,262	96	3,414
Weslaco 8-10-75	24.4	39	91	241	1,938	54	2,823	78	3,409	94	3,618
Weslaco 11-9-75	27.6	32	106	198	2,143	63	2,767	82	3,285	97	3,391
X Acala B-SS-10	39.4	28	69	144	1,617	54	2,172	72	2,643	88	3,002
X Acala B-SS-32	40.2	26	47	136	1,227	46	1,736	65	2,335	87	2,685
X Acala B-ST-36	34.3	32	46	116	1,487	47	2,170	68	2,745	86	3,179
X Acala B-SS-51	41.3	29	45	107	1,103	44	1,627	65	2,204	88	2,515
X Acala B-SS-61	33.9	30	66	134	1,366	48	2,000	70	2,507	88	2,840
X Acala B-169	35.8	23	35	112	1,249	45	1,802	65	2,339	84	2,773
X Acala SS gs 1-3	20.5	30	69	149	1,303	43	1,805	60	2,695	89	3,036
X Acala SS gs 2-3	22.0	34	75	226	1,933	62	2,430	78	2,906	93	3,126
X Acala SS gs 5-1	24.4	35	78	186	1,504	53	1,940	68	2,493	87	2,865
X Acala SS Cl-1	32.3	38	78	260	1,843	62	2,376	80	2,788	94	2,982
X Acala SS CHRP	33.9	38	113	273	2,445	79	2,925	95	3,043	99	3,083
X Acala SS ERG	39.8	34	102	242	2,295	70	2,733	83	3,092	94	3,279
X Acala SS Okra 42-3	30.7	31	60	175	1,431	46	2,235	71	2,814	90	3,129
X Acala SS Okra 43-3	25.6	41	65	183	1,914	59	2,495	77	2,900	90	3,226
X Acala SS Okra 43-7	26.8	34	62	241	1,568	51	2,264	74	2,768	91	3,054
X Acala SS N9Y	28.0	33	96	224	1,925	49	2,553	64	3,260	82	3,967
X Acala SB 7-1	24.8	37	127	308	2,048	68	2,515	83	2,865	94	3,035
X Acala SS 78	32.3	36	47	143	1,456	45	2,117	65	2,943	90	3,269
X Acala SS 95	24.8	29	80	173	1,489	47	2,059	65	2,797	88	3,176
X Acala SS 126	38.2	38	59	184	1,782	54	2,421	74	3,031	93	3,278
Mean	28.7	33	81	189	1,622	50	2,284	70	2,928	90	3,227

[1]Means of 4 replications for each criteria measured.
[2]100 percent accumulative yield column.

Table 3.--*Fiber property measurements*[1] *of sequentially picked cotton from cultivars and selections grown in 20-inch rows in Imperial Valley, Calif., 1979*

Cultivar or selection	Bolls open: Aug. 8					Aug. 9-15					Aug. 16-22					Aug. 23-29				
	UHM	Uniformity	T_1	E_1	Mic.	UHM	Uniformity	T_1	E_1	Mic.	UHM	Uniformity	T_1	E_1	Mic.	UHM	Uniformity	T_1	E_1	Mic.
Acala SJ-2	1.14	50.5	2.83	8.5	4.01	1.14	50.5	2.78	8.2	3.82	1.10	49.0	2.56	8.1	3.80	1.08	48.3	2.53	8.0	3.64
Cascot 5-77 gs	1.09	51.0	2.31	9.4	4.63	1.10	48.0	2.26	9.7	3.41	1.03	48.5	2.00	8.7	3.58	1.07	46.0	2.05	8.6	3.25
Cascot 13-77	1.06	45.8	1.88	7.1	4.33	.99	44.0	1.82	6.8	3.73	.99	44.0	1.65	7.1	3.57	1.02	42.5	1.72	6.8	3.21
Cascot 56-77	1.11	47.0	2.18	8.0	4.06	1.09	46.3	2.12	7.8	3.42	1.05	45.0	1.94	7.6	3.35	.95	43.5	2.03	7.6	2.97
Cascot 58-77	1.08	49.5	2.12	10.2	3.88	1.01	46.8	2.04	10.5	2.97	.99	45.8	1.83	9.1	2.88	1.07	43.8	1.86	8.9	2.55
Coker 304	1.11	48.0	2.29	8.0	4.43	1.09	47.0	2.24	8.5	3.85	1.04	45.0	1.79	7.3	3.85	1.02	44.5	2.03	7.1	3.60
Coker 310	1.12	48.0	2.29	7.4	4.30	1.08	48.8	2.27	8.1	3.76	1.08	45.0	2.03	7.1	3.94	1.05	45.8	2.15	6.9	3.82
Coker 3113	1.08	49.3	2.26	8.9	4.40	1.12	49.3	2.16	8.9	4.26	1.06	49.3	2.14	8.6	4.17	1.07	46.8	2.27	8.8	4.25
Coker 3114	1.12	47.0	2.27	8.7	4.38	1.10	46.8	2.28	8.2	4.10	1.06	45.8	2.20	7.7	4.03	1.07	45.0	2.29	7.9	4.13
Coker 801N	1.11	50.3	2.38	8.6	4.49	1.09	49.5	2.25	9.0	4.11	1.01	49.0	2.14	8.7	4.27	1.08	47.0	2.39	7.9	3.94
Coker 600B	1.13	47.5	2.37	8.5	4.30	1.13	47.3	2.30	8.4	3.86	1.06	46.5	2.05	8.4	3.92	1.02	44.8	2.16	8.4	3.84
Delcot 311	1.10	51.8	2.38	10.2	4.08	1.07	51.0	2.39	9.8	3.83	1.06	51.0	2.42	10.1	3.78	1.06	47.3	2.29	8.7	3.63
D&PL 70	1.07	47.5	2.32	9.5	4.26	1.04	49.5	2.30	8.7	4.07	1.04	47.5	2.06	7.8	3.92	.99	46.3	2.18	8.2	3.41
D&PL 7120	1.07	50.8	2.40	9.8	4.40	1.03	50.5	2.19	9.6	4.28	1.01	48.5	2.17	9.2	4.31	.99	46.8	2.18	8.4	3.55
D&PL 703-146-23-31	1.13	48.5	2.21	8.7	3.85	1.08	48.5	2.15	9.0	3.55	1.08	45.8	2.02	8.3	3.36	1.04	43.8	2.00	7.4	2.80
D&PL 712-22-33-44	1.06	50.5	2.36	9.3	4.49	1.03	49.0	2.18	9.3	4.20	.99	46.3	2.01	9.3	4.1	.99	45.8	2.12	9.2	3.55
D&PL 728-356-41-51	1.02	50.3	2.48	9.3	4.58	.98	50.5	2.20	8.6	4.41	.96	48.5	2.19	8.2	4.31	.95	47.0	2.20	8.9	4.12
D&PL 729-379-42-53	1.05	49.5	2.22	8.3	4.24	1.03	49.0	2.30	8.5	4.00	.98	48.0	2.03	7.8	4.04	.99	46.8	2.13	7.9	3.36
Dunn 118	1.15	50.0	2.39	8.7	4.07	1.14	45.8	2.27	7.3	3.52	1.12	46.0	2.25	7.5	3.58	1.08	46.3	2.47	7.6	3.39
Dunn 119	1.14	49.3	2.46	7.8	4.02	1.15	49.3	2.34	8.2	3.80	1.12	48.5	2.33	8.2	3.56	1.09	46.5	2.29	8.3	3.51
Dunn 120	1.09	46.0	2.10	7.2	4.27	1.09	45.8	2.12	7.4	3.84	1.06	46.8	2.07	7.6	3.86	1.06	46.8	2.23	7.8	3.46
Dunn 219	1.16	48.5	2.55	8.1	3.98	1.11	49.5	2.40	8.9	3.71	1.11	47.5	2.35	8.0	3.74	1.08	47.8	2.40	8.6	3.50
Lambright gs F	1.04	47.8	2.32	8.2	4.12	1.04	46.5	2.02	8.1	3.50	1.00	46.0	2.03	7.3	3.48	.99	42.8	2.08	7.6	3.41
Lambright gs N	1.08	48.3	2.01	6.8	4.30	1.05	46.0	1.81	7.6	3.88	1.06	47.3	1.86	6.8	4.04	1.02	46.0	1.87	7.2	3.94
Paymaster 145	1.01	51.5	2.34	8.0	4.73	1.01	50.5	2.10	8.3	4.48	.95	50.0	2.13	7.7	4.51	1.03	51.5	2.17	7.2	4.03
Paymaster 303T	1.03	51.3	2.29	8.3	4.54	1.01	48.8	2.12	7.6	4.15	1.01	49.3	2.24	7.7	4.02	.99	48.0	2.22	7.8	3.77
Paymaster 792	1.04	52.3	2.29	8.1	4.83	1.02	50.5	2.13	7.8	4.22	1.01	48.5	2.15	7.4	3.92	1.00	47.0	2.17	7.8	3.80
Paymaster 4298	1.08	49.0	2.28	6.8	4.35	1.11	49.0	2.27	6.9	3.87	1.11	48.0	2.38	6.1	4.08	.99	47.5	2.29	7.7	4.03
Pioneer 77	1.05	49.3	2.18	7.9	3.84	1.03	49.0	2.02	7.8	3.88	1.01	48.0	1.95	5.8	3.74	1.00	47.3	1.94	7.6	3.62
Pioneer X168	1.03	49.5	2.18	7.6	4.23	1.02	47.5	2.16	7.3	3.67	.98	49.5	1.91	8.4	3.67	.96	45.0	2.00	7.3	3.73
Pioneer X7006	1.02	49.0	2.20	8.3	4.73	1.03	46.5	2.11	7.3	4.10	.99	47.0	2.03	6.9	4.06	1.01	44.8	2.15	7.4	3.61
Stoneville 213	1.12	47.5	2.10	8.4	4.47	1.10	47.5	2.07	8.0	4.39	1.07	46.5	1.95	7.6	4.32	1.05	47.0	2.08	7.3	3.90
Stoneville 302	1.08	46.8	2.24	7.8	4.14	1.08	46.3	2.10	6.8	3.81	1.06	47.5	2.14	7.2	3.85	1.07	45.8	2.13	7.4	4.00
Stoneville 316	1.05	47.0	2.16	8.2	4.11	1.05	47.5	2.07	8.5	3.85	1.02	47.8	1.96	8.0	3.73	1.00	45.5	1.97	7.7	3.64
Stoneville 506	1.13	47.0	2.16	8.8	4.27	1.09	46.3	2.03	8.3	4.00	1.07	47.3	1.95	8.0	4.19	1.07	47.5	2.07	8.6	3.45
Stoneville 825	1.12	47.8	2.05	6.9	4.73	1.12	47.8	1.95	7.4	4.35	1.10	47.3	1.94	7.0	4.38	1.08	47.0	2.02	6.8	3.81
Stoneville 1688	1.17	47.0	2.25	8.0	4.48	1.14	46.8	2.26	8.3	4.46	1.12	47.5	2.13	7.7	4.43	1.11	46.8	2.02	7.6	3.49
Tamcot CAMD EE78	1.06	50.0	2.12	9.2	4.09	1.03	48.3	2.03	8.5	3.58	.99	46.3	1.81	8.3	3.65	1.01	45.5	1.88	7.8	3.83

Tamcot SP 37A	1.06	50.0	2.36	8.2	4.13	1.05	50.3	2.27	9.1	3.55	1.02	49.3	2.13	8.1	3.60	1.03	47.8	2.06	7.0	3.41
Tamcot SP 21S	1.08	49.3	2.29	10.1	3.78	1.08	49.0	2.21	9.4	3.45	1.04	47.3	2.07	9.0	3.25	1.01	47.5	1.98	8.6	3.19
Tamcot ORSU 78	1.14	50.8	2.78	9.0	4.30	1.10	50.3	2.36	8.3	3.94	1.08	48.8	2.52	8.4	3.38	1.04	46.8	2.47	7.6	3.38
Tamcot Blank SU78	1.08	49.5	2.56	8.3	4.04	1.08	49.0	2.50	8.4	3.50	1.02	47.5	2.30	8.1	3.72	1.01	463	2.45	8.2	3.19
Weslaco 2-1-78	1.05	47.0	2.03	8.5	3.88	1.03	46.5	1.84	8.9	3.52	.97	46.5	1.69	8.2	3.47	.97	46.0	1.70	8.1	2.93
Weslaco 3-78	1.09	47.5	2.05	9.3	3.90	1.05	46.8	1.82	8.8	3.62	.99	47.3	1.71	8.7	3.48	.97	45.7	1.86	8.2	3.24
Weslaco 8-10-75	1.08	47.8	2.0	8.7	4.04	1.06	46.5	1.98	8.9	3.78	1.01	47.0	1.89	8.2	3.57	.99	46.0	1.77	8.4	3.18
Weslaco 11-9-75	1.07	47.5	2.03	8.9	3.67	1.04	46.5	1.86	8.9	3.43	1.00	47.5	1.84	8.6	3.06	.97	45.3	1.70	8.4	2.93
X Acala B-SS-10	1.05	50.5	2.37	8.5	4.25	1.09	48.8	2.15	7.5	4.23	1.10	48.3	2.32	7.8	4.13	1.09	48.0	2.45	8.9	3.95
X Acala B-SS-32	1.12	49.5	2.52	8.0	4.25	1.04	47.8	2.42	8.7	4.11	1.04	47.5	2.30	7.7	4.26	1.10	48.8	2.65	8.5	4.12
X Acala B-ST-36	1.05	51.3	2.54	8.2	4.70	1.04	50.5	2.43	8.1	4.43	1.07	50.0	2.40	8.2	4.34	.99	49.3	2.48	8.0	4.46
X Acala B-SS-51	1.11	51.8	2.63	7.9	4.37	1.04	50.0	2.46	7.7	4.21	1.06	49.8	2.39	7.1	4.16	1.10	48.3	2.64	7.0	4.20
X Acala B-SS-61	1.06	53.8	2.34	8.6	4.38	1.07	51.3	2.45	8.2	4.26	1.04	48.5	2.50	8.0	4.08	1.05	49.3	2.71	7.8	4.11
X Acala B-169	1.05	51.5	2.34	8.5	4.50	1.08	50.0	2.28	7.7	4.41	1.06	49.3	2.26	8.1	4.53	.96	48.3	2.47	7.8	4.42
X Acala SS gs 1-3	1.07	52.3	2.28	8.0	5.02	1.05	49.8	2.29	8.3	4.35	1.02	49.5	2.07	8.1	4.53	1.04	49.0	2.25	7.7	4.30
X Acala SS gs 2-3	1.05	52.3	2.48	9.1	4.88	1.05	51.3	2.47	8.5	4.33	1.03	50.0	2.42	7.9	4.33	1.04	48.3	2.60	8.0	4.21
X Acala SS gs 5-1	1.09	49.5	2.34	8.4	4.36	1.07	49.3	2.28	8.2	3.79	1.05	48.0	2.12	7.5	3.79	1.11	46.0	2.12	7.8	3.80
X Acala SS C1-1	1.12	50.5	2.50	8.4	4.53	1.12	50.0	2.44	8.0	4.33	1.10	48.0	2.48	8.1	4.02	1.09	47.3	2.67	7.2	3.87
X Acala SS CHRP	1.04	50.0	2.27	8.8	4.48	1.03	50.8	2.17	8.6	4.08	1.03	49.3	2.32	8.4	3.78	1.03	49.3	2.29	8.8	4.25
X Acala SS ERG	1.03	50.0	2.12	7.8	4.48	1.01	49.8	2.16	7.7	4.23	1.01	49.3	2.14	7.1	4.21	1.10	48.8	2.16	7.4	4.40
X Acala SS Okra 42-3	1.17	47.3	2.24	8.6	3.90	1.16	47.0	2.07	8.4	3.57	1.13	46.0	2.05	8.8	3.60	1.08	44.5	2.02	8.3	3.19
X Acala SS Okra 43-3	1.14	49.8	2.55	8.1	4.20	1.10	49.0	2.34	7.3	4.00	1.09	48.0	2.37	7.8	4.05	1.08	46.5	2.31	7.4	4.03
X Acala SS Okra 43-7	1.14	51.3	2.51	8.9	4.46	1.11	49.3	2.40	8.9	4.13	1.08	49.0	2.17	8.2	4.28	.97	48.0	2.38	8.3	3.80
X Acala SS N9Y	1.02	51.0	2.32	8.5	4.32	1.02	50.3	2.19	7.8	4.03	1.01	49.5	2.21	8.0	4.02	1.02	49.5	2.25	8.1	4.18
X Acala SB 7-1	1.08	52.0	2.30	8.5	4.08	1.06	48.5	2.24	7.7	3.55	1.05	48.8	2.43	7.7	3.37	1.00	48.8	2.51	8.3	3.30
X Acala SS 78	1.15	50.3	2.63	9.1	3.48	1.13	49.3	2.50	9.0	3.37	1.11	48.0	2.45	8.6	3.47	1.09	45.8	2.55	8.2	3.17
X Acala SS 95	1.13	49.3	2.44	7.6	4.03	1.12	48.5	2.52	7.7	3.74	1.08	48.8	2.26	7.6	3.70	1.09	46.8	2.46	7.6	3.41
X Acala SS 126	1.20	49.8	2.66	8.7	3.95	1.19	48.8	2.61	8.4	3.67	1.15	47.8	2.51	8.3	3.66	1.12	47.3	2.59	8.2	3.65
Means	1.09	49.4	2.28	8.4	4.87	1.07	48.5	2.22	8.3	3.91	1.05	47.8	2.14	8.0	3.88	1.04	46.7	2.21	7.9	3.66

[1]UHM = 2.5 percent span length, inches; Uniformity = U.I., 50 percent span length divided by 2.5 percent span length, percent; T_1 = strength, grams/grex; E_1 = elongation, percent; Mic. = micronaire.

Table 4.--*Plant height, seed cotton yield, maturity responses,*[1] *and fiber property measurements*[2] *of cotton cultivars and selections planted April 19 in 14- to 21-inch-row spacing in the San Joaquin Valley, Calif., 1978*

Cultivar or selection	Plant		Accumulative seed cotton yields and percent harvested					Lint percent	Fiber properties of total crop				
	Height	Population	Aug. 31		Sept. 22		Oct. 9[3]		UHM	Uniformity	T_1	E_1	Mic.
	Inches	*Thousands per acre*	*Pounds*	*Percent*	*Pounds*	*Percent*	*Pounds*						
Acala SJ-2	29	45	593	17	2,861	81	3,518	34.0	1.19	47	2.50	7.3	3.53
Acala SJ-5	26	43	366	13	2,306	81	2,822	36.9	1.15	45	2.80	7.6	3.85
Acala N.M. 288	26	45	1,266	38	3,057	91	3,372	34.2	1.18	46	2.76	7.2	4.24
Acala N.M. 1517 E1	25	44	716	24	2,623	88	2,991	33.8	1.17	48	2.46	9.3	3.94
Acala N.M. 1517 E2	26	45	714	20	2,888	84	3,425	33.6	1.18	48	2.54	10.1	4.00
Cascot BR-2	21	46	941	30	2,929	94	3,110	38.3	1.05	45	2.18	8.0	3.84
Cascot L-7	22	44	432	13	2,965	91	3,259	37.7	1.07	44	2.28	7.9	4.00
Coker 310	25	47	480	14	3,081	92	3,361	35.5	1.14	45	2.23	8.0	4.05
Coker 74-118	25	41	381	12	3,048	94	3,429	37.4	1.13	46	2.25	8.1	4.28
Coker 3113	23	44	370	12	2,843	91	3,128	37.4	1.10	45	2.19	9.4	4.02
Delcot 277	27	43	707	20	3,255	93	3,502	35.1	1.16	46	2.25	9.5	3.58
D&PL 61	28	47	62	2	2,615	77	3,410	35.9	1.16	45	2.27	8.4	4.04
D&PL 703-146-22	23	46	106	3	2,797	91	3,068	37.0	1.10	45	2.39	7.5	3.48
D&PL 703-146-22-23-3	26	44	110	4	2,539	92	2,755	38.2	1.11	44	2.29	7.8	3.72
D&PL 712-22-23-43	25	45	130	4	2,822	92	3,079	36.4	1.08	46	2.40	8.5	3.97
D&PL 728-310-41-51	19	43	192	6	2,537	84	3,037	39.6	1.09	44	2.20	6.3	4.06
D&PL 728-315-43	20	46	291	10	2,742	90	3,035	36.6	1.04	45	2.37	7.5	3.87
D&PL 728-326-42	22	43	344	5	3,042	92	3,319	38.0	0.94	46	2.19	9.5	4.00
Dunn 118	22	42	596	17	3,176	91	3,494	32.9	1.17	46	2.42	8.3	3.92
Dunn 120	25	46	562	15	3,403	89	3,819	35.1	1.09	46	2.25	7.8	3.98
Dunn 219	25	41	275	8	3,306	93	3,555	33.5	1.14	47	2.33	7.6	4.13
Dunn 224	22	44	465	11	4,042	95	4,233	35.7	1.09	46	2.11	8.9	4.19
Dunn 435	23	42	599	15	3,554	89	4,000	34.4	1.12	45	2.20	7.7	4.10
Lockett 77	23	40	542	16	3,196	93	3,438	35.6	1.07	45	2.33	7.1	3.70
Paymaster Dwarf	17	44	971	30	2,965	91	3,267	37.7	1.01	47	2.27	7.9	4.01
Paymaster 226	27	46	564	22	2,119	82	2,573	35.4	1.09	47	2.76	7.8	3.95
Paymaster 303	24	43	485	13	3,280	89	3,624	34.5	1.08	44	2.09	6.8	3.94
Paymaster 792	24	45	987	28	3,293	95	3,469	34.2	1.02	48	2.21	8.5	4.28
Stoneville 213	26	47	81	2	2,740	99	3,454	35.1	1.16	45	2.24	7.9	3.92
Stoneville 731N	28	45	216	6	2,885	84	3,435	36.4	1.10	44	2.16	5.3	3.90
Tamcot CAMD-E	17	45	894	19	2,645	95	2,773	36.3	1.04	45	2.16	6.8	3.40
Tamcot SP-21	26	43	577	19	2,877	95	3,032	36.6	1.06	45	2.22	7.7	3.78
Tamcot SP-21S	22	41	819	30	2,548	93	2,733	36.6	1.06	44	2.20	7.5	3.39
Tamcot ORC-IC-77	23	47	477	18	2,315	91	2,546	35.1	1.02	44	2.12	5.4	3.57
Weslaco 2-1-75	22	46	916	29	2,954	94	3,145	37.3	1.05	46	2.06	8.4	3.50
Weslaco 3-75	23	44	608	23	2,464	92	2,689	33.5	1.04	43	2.14	7.5	3.50
Weslaco 6-2-75	22	41	1,310	43	2,810	92	3,042	36.6	1.02	42	2.07	7.1	3.60
Weslaco 8-10-75	24	44	903	26	3,451	99	3,489	33.8	1.04	43	2.11	7.0	3.13

Weslaco 11-9-75	24	43	352	14	2,394	95	2,518	34.2	1.01	44	1.84	7.6	3.38
Weslaco 17-8-75	26	46	868	32	2,621	97	2,703	33.6	.99	42	1.77	7.9	3.30
X Acala gs SS 1-3	17	39	1,227	42	2,727	93	2,949	36.6	1.02	48	2.16	9.7	4.77
X Acala gs SS 2-3	21	41	1,247	40	2,927	91	3,031	35.9	1.00	48	2.33	9.8	4.75
X Acala gs SS 5-1	22	39	1,246	41	2,797	92	3,040	36.3	1.05	45	2.36	8.0	3.60
X Acala gs SS-Sh	26	42	855	25	2,784	82	3,366	36.8	1.12	47	2.65	10.1	4.25
X Acala SS BRD	25	44	215	6	2,855	84	3,381	32.2	1.15	46	2.20	8.5	3.87
X Acala SS CL-1	24	46	707	22	2,793	88	3,186	32.2	1.13	48	2.26	8.9	4.63
X Acala SS ERG	23	44	1,066	29	3,181	87	3,641	31.6	1.02	46	2.18	6.4	4.01
X Acala SS N9Y	25	46	1,128	30	3,487	93	3,749	38.1	1.03	46	2.21	8.1	4.50
X Acala SS Okra 41-7	22	41	1,053	37	2,682	94	2,866	33.6	1.06	47	2.39	9.5	4.78
X Acala SS Okra 42-3	22	42	828	27	2,744	88	3,101	32.0	1.17	46	2.12	7.9	3.81
X Acala SS Okra 43-3-3	19	44	993	32	2,932	94	3,106	34.0	1.12	48	2.28	7.6	4.53
X Acala SS Okra 43-7-2	23	45	711	20	3,407	95	3,579	33.6	1.12	47	2.36	9.1	4.38
X Acala SS 55	22	43	912	20	4,334	94	4,614	36.2	1.04	45	2.47	7.1	3.78
X Acala SS 59	37	43	857	24	3,317	93	3,551	41.2	1.06	45	2.17	9.1	4.03
X Acala SS 78	26	44	176	7	2,310	93	2,496	33.6	1.13	46	2.49	8.4	3.45
X Acala SS 79	26	43	383	11	2,680	80	3,361	33.0	1.13	45	2.66	7.5	3.58
X Acala SS 94	25	44	626	24	2,388	92	2,581	34.4	1.10	44	2.33	6.0	3.75
X Acala SS 126	24	44	1,171	36	3,134	95	3,297	4.9	1.15	46	2.43	6.7	4.18
X Acala SS 6008	23	43	231	10	1,921	83	2,319	33.2	1.13	42	2.34	8.0	3.33
Means	24	44	642	20	2,905	91	3,215	35.4	1.09	45	2.29	7.94	3.92

[1]Means of 4 replications for plant height, seed cotton yield, and maturity response.

[2]UHM = 2.5 percent span length, inches; Uniformity = U.I., 50 percent span length divided by 2.5 percent span length, percent; T_1 = strength, grams/grex; E_1 = elongation, percent; Mic. = micronaire.

[3]100 percent accumulated yield column.

Table 5.--*Plant height, seed cotton yield, maturity responses,*[1] *and fiber property measurements*[2] *of cotton cultivars and selections planted May 11 in 14- and 26-inch-row spacing in the San Joaquin Valley, Calif., 1978*

Cultivar or selection	Plant: Height	Plant: Population	Accumulative seed cotton yields and percent harvested: Sept. 13		Sept. 27		Oct. 11[3]	Lint percent	Fiber properties of total crop: UHM	Uniformity	T_1	E_1	Mic.
	Inches	*Thousands per acre*	*Pounds*	*Percent*	*Pounds*	*Percent*	*Pounds*						
Acala SJ-2	25	26	370	15	1,323	52	2,528	33.4	1.16	46	2.71	7.2	3.88
Acala SJ-5	23	23	156	9	987	57	1,731	35.4	1.14	45	2.71	7.4	3.77
Acala N.M. 288	24	22	733	33	1,509	65	2,313	33.3	1.21	46	2.63	9.6	3.79
Acala N.M. 1517 El	23	22	599	25	1,473	61	2,418	33.4	1.18	46	2.74	8.2	3.98
Cascot BR-2	19	23	881	38	1,923	82	2,345	36.2	1.07	43	2.16	8.3	3.93
Coker 310	22	26	163	7	1,335	58	2,317	33.3	1.17	45	2.48	8.0	3.40
Coker 74-118	22	22	152	4	1,700	50	3,396	35.3	1.15	47	2.38	8.0	3.65
Coker 3113	21	23	185	9	1,158	55	2,095	36.1	1.13	46	2.46	8.2	3.69
Delcot 277	24	24	242	9	1,544	55	2,758	32.4	1.21	44	2.40	10.2	3.42
D&PL 61	24	26	170	8	1,132	55	2,051	34.0	1.16	46	2.41	8.4	3.89
D&PL 703-146-22	22	23	196	9	1,141	53	2,170	37.3	1.14	43	2.42	8.0	3.50
D&PL 703-146-22-23-3	23	21	44	2	1,055	46	2,277	37.3	1.14	43	2.22	8.0	3.51
D&PL 728-310-41-51	18	24	220	10	1,104	51	2,145	58.6	1.11	44	2.21	7.3	3.88
D&PL 728-315-43	20	25	326	17	1,255	67	1,863	34.7	1.05	45	2.47	8.4	3.82
D&PL 728-326-42	21	24	460	17	1,947	72	2,718	38.9	.99	46	2.41	7.8	3.77
Dunn 118	20	21	344	16	1,401	66	2,121	30.4	1.19	46	2.56	6.5	3.55
Dunn 119	18	26	196	10	1,255	66	1,907	31.4	1.15	46	2.57	6.7	3.73
Dunn 120	23	22	253	12	1,321	62	2,145	34.4	1.12	45	2.31	6.6	3.88
Dunn 219	22	23	460	24	1,467	77	1,914	34.2	1.10	44	2.57	6.6	3.88
Dunn 224	19	22	403	14	1,590	57	2,804	34.1	1.09	46	2.37	7.7	4.05
Dunn 435	19	23	482	21	1,676	73	2,300	33.3	1.10	44	2.35	6.1	3.73
Lockett 77	20	23	637	26	1,782	73	2,455	33.7	1.08	44	2.36	6.8	3.23
Lockett 1140	21	24	372	16	1,390	57	2,370	33.9	1.09	46	2.20	7.6	3.65
Paymaster Dwarf	17	23	852	32	2,176	82	2,667	35.1	1.05	47	2.37	10.3	3.59
Paymaster 303	23	22	348	5	1,454	65	2,225	33.1	1.07	45	2.23	7.9	4.01
Paymaster 792	22	24	595	25	1,747	73	2,377	32.6	1.08	48	2.22	9.2	3.85
Stoneville 213	22	23	115	5	910	43	2,114	33.6	1.14	44	2.21	9.0	4.14
Stoneville 731N	26	24	121	5	1,203	53	2,255	34.1	1.13	44	2.16	7.9	4.11
Tamcot CAMD-EE	18	26	1,002	36	2,235	81	2,751	34.8	1.04	44	2.17	6.8	3.19
Tamcot SP-21	22	26	590	24	1,925	79	2,445	34.3	1.08	43	2.22	7.3	3.51
Tamcot SP-21S	21	24	388	18	1,599	75	2,132	35.5	1.07	44	2.28	9.1	3.23
Tamcot ORC-IC-77	21	24	383	17	1,606	71	2,262	33.3	1.06	44	2.21	7.4	4.02
Weslaco 2-1-75	20	21	845	35	991	41	2,425	32.6	1.06	44	1.92	8.5	3.00
Weslaco 11-9-75	21	25	156	14	1,942	54	3,575	33.8	1.12	45	1.92	8.6	3.40
X Acala gs SS-Sh	24	27	868	42	1,550	74	2,084	33.4	1.06	47	2.23	7.3	3.98
X Acala SS BRD	22	24	123	8	955	54	1,755	32.6	1.14	44	2.16	8.8	3.16
X Acala SS CL-1	22	22	799	31	1,894	73	2,588	31.1	1.12	45	2.38	10.4	3.86
X Acala SS N9Y	22	21	469	19	1,626	66	2,454	37.3	1.05	46	2.14	8.3	3.86

X Acala SS Okra 41-3	20	26	167	4	1,822	48	3,806	32.1	1.19	46	2.34	9.2	4.07
X Acala SS Okra 42-3	21	23	811	23	2,856	81	3,540	30.1	1.18	42	2.18	8.1	3.68
Means	22	24	417	17	1,524	63	2,415	34.6	1.11	44	2.34	8.0	3.70

[1]Mean of 4 replications for plant height, population, and yields.

[2]UHM = 2.5 percent span length, inches; Uniformity = U.I., 50 percent span length divided by 2.5 percent span length, percent; T_1 = strength, grams/grex; E_1 = elongation, percent; Mic. = micronaire.

[3]100 percent accumulative yield column.

Table 6.--*Plant height, seed cotton yield, maturity, lint percent,*[1] *and fiber property measurements*[2] *of cotton cultivars and selections grown in a 20-inch-row configuration in the San Joaquin Valley, Calif., 1979*

Cultivar or selection	Plant		Accumulative seed cotton yields and percent harvested			Lint percent	Fiber properties of total harvest				
	Height	Population	Aug. 20		Sept. 17[3]		UHM	Uniformity	T_1	E_1	Mic.
	Inches	*Thousands per acre*	*Pounds*	*Percent*	*Pounds*						
Acala SJ-2	30	41	661	23	3,001	35.3	1.10	45	2.41	8.0	3.85
Acala SJ-5	26	42	826	32	2,643	37.5	1.08	44	2.36	7.9	3.07
Cascot BR-2	25	38	1,129	41	2,753	35.9	1.05	43	2.17	8.8	2.95
Coker 304	24	40	421	15	2,698	35.9	1.10	42	2.08	8.1	2.88
Coker 310	24	37	413	18	2,533	36.0	1.15	43	2.31	7.8	3.33
Coker 3113	28	37	551	19	3,084	38.5	1.09	41	2.32	8.7	2.90
Coker 3114	26	33	325	14	2,561	40.0	1.14	46	2.43	8.5	3.28
Coker 801N	28	31	633	22	2,891	36.5	1.07	45	2.33	8.3	3.38
Coker 600B	25	37	578	23	2,753	37.2	1.10	43	2.31	8.5	3.05
Delcot 311	21	33	785	27	3,001	37.8	1.04	43	2.36	10.5	3.35
D&PL 70	24	38	179	8	2,175	36.7	1.10	43	2.43	8.6	3.30
D&PL 7120	26	33	198	8	2,285	38.6	1.03	44	2.20	9.0	3.58
D&PL 703-146-23-31	22	35	248	10	2,368	40.4	1.08	41	2.14	8.4	3.25
D&PL 712-22-23-41	21	33	523	23	2,313	37.0	1.04	43	2.29	8.7	3.55
D&PL 728-356-41-51	22	34	771	41	1,927	35.7	.97	42	2.32	9.3	3.15
D&PL 729-379-42-53	24	33	716	32	2,258	37.0	.97	45	2.09	8.3	2.90
Dunn 118	22	35	496	22	2,285	33.0	1.14	46	2.40	8.1	3.37
Dunn 119	24	33	441	22	2,175	34.5	1.11	44	2.28	7.5	3.19
Dunn 120	22	30	743	35	2,148	34.9	1.10	44	2.33	8.3	3.13
Dunn 145	21	32	1,170	50	2,423	36.5	1.00	41	1.93	7.7	3.24
Dunn 219	22	31	248	11	2,671	33.8	1.15	46	2.22	8.4	3.59
Dunn 411	24	33	441	19	2,368	36.0	1.09	43	2.18	8.8	3.52
Dunn 905	23	35	226	11	1,982	36.1	1.12	42	2.28	8.5	3.72
Lambright gs F	23	33	405	18	2,175	37.8	1.05	45	2.21	8.3	3.70
Lambright gs N	21	36	1,322	51	2,698	36.3	1.00	47	2.24	8.0	3.75
Paymaster 303T	22	35	1,046	34	3,112	36.6	1.03	45	2.30	7.8	3.45
Paymaster 792	20	36	1,432	39	3,662	34.4	1.05	46	2.30	8.0	3.78
Paymaster 4298	21	37	1,101	37	3,029	35.4	1.11	46	2.38	6.8	3.83
Pioneer L7	22	31	1,134	44	2,624	35.6	1.06	44	2.16	8.0	3.11
Pioneer X168	23	37	925	36	2,547	36.3	1.03	43	2.22	8.3	3.22
Pioneer X7006	21	33	760	28	2,682	38.3	1.00	46	2.08	8.1	3.91
Stoneville 213	20	31	385	15	2,539	35.6	1.06	40	2.15	9.5	3.17
Stoneville 302	22	33	347	15	2,340	37.3	1.02	42	2.24	8.3	3.02
Stoneville 316	27	37	743	25	3,001	35.4	1.03	42	2.02	9.4	3.08

Stoneville 506	28	32	292	11	2,781	34.5	1.12	44	2.05	9.2	3.45
Stoneville 825	26	31	294	11	2,753	37.0	1.08	41	2.03	9.5	3.43
Stoneville 1688	21	36	339	13	2,679	37.8	1.15	39	2.12	9.3	3.69
Tamcot CAMD-EE	17	31	1,514	54	2,781	35.4	1.08	43	2.13	9.0	2.84
Tamcot 37A	25	29	1,335	50	2,684	35.6	1.05	45	2.11	8.9	3.19
Tamcot SP 21S	21	30	771	31	2,506	36.8	1.11	46	2.29	9.2	3.75
Tamcot ORSU 78	20	34	1,046	48	2,258	36.8	1.10	45	2.30	9.6	3.55
Tamcot Blank SU 78	19	32	1,129	44	2,533	34.7	1.08	44	2.34	8.8	3.38
X Acala SS gs 1-3	19	32	1,294	48	2,781	36.5	1.00	45	2.23	8.7	4.25
X Acala SS gs 2-3	20	34	1,569	52	3,084	35.8	1.04	47	2.33	9.1	4.64
X Acala SS gs 5-1	19	30	1,707	57	2,974	37.1	1.04	43	2.23	8.3	3.00
X Acala SS C1-1	26	35	1,652	55	3,029	34.4	1.14	45	2.45	8.5	4.17
X Acala SS CHRP	23	36	2,693	84	3,194	33.1	1.01	45	2.05	8.4	4.09
X Acala SS ERG	24	33	1,900	58	3,318	33.5	1.00	44	2.12	7.7	4.03
X Acala SS Okra 42-3	26	32	983	35	2,919	32.4	1.16	46	2.25	8.7	3.53
X Acala SS Okra 43-3	22	37	1,156	41	2,974	34.5	1.08	44	2.30	7.3	3.54
X Acala SS Okra 43-7	23	38	556	20	2,891	31.9	1.10	42	2.33	8.6	3.64
X Acala SS Okra 41-7	21	32	1,046	36	2,946	34.6	1.05	48	2.53	8.1	4.25
X Acala SS N9Y	23	35	881	38	2,340	37.3	1.02	44	2.16	8.2	3.58
X Acala SS SB-7	21	31	1,036	47	2,172	34.3	1.08	45	2.16	7.5	3.80
X Acala SS 55	22	30	1,514	45	3,552	36.5	1.10	46	2.43	7.9	3.50
X Acala SS 59	23	33	1,412	54	2,698	40.3	1.10	47	2.37	8.1	3.95
X Acala SS 78	24	31	1,487	46	3,276	37.6	1.03	44	2.52	8.1	3.33
X Acala SS 79	24	33	1,063	41	2,643	39.3	1.10	48	2.37	9.1	3.80
X Acala SS 94	23	31	669	25	2,814	36.8	1.09	43	2.13	8.6	3.05
X Acala SS 95	21	32	606	28	2,175	34.7	1.12	43	2.64	8.5	2.87
X Acala SS 126	26	35	964	28	3,414	36.1	1.14	43	2.42	8.3	3.71
X Acala SS 391	24	31	551	20	2,808	36.3	1.07	46	2.07	8.0	3.98
X Acala SS 6008	25	33	606	20	2,808	35.4	1.07	46	2.07	8.1	3.15
Means	23	34	863	32	2,690	36.1	1.07	44	2.25	8.5	3.47

[1]Means of 4 replications for plant height, population, and accumulative yield.

[2]UHM = 2.5 percent span length, inches; Uniformity = U.I., 50 percent span length divided by 2.5 percent span length, percent; T_1 = strength, grams/grex; E_1 = elongation, percent; Mic. = micronaire.

[3]100 percent accumulative yield column.

Table 7.--*Seed cotton yield, maturity responses,*[1] *and fiber property measurements*[2] *of cotton cultivars and selections grown in 20-inch configurations in the San Joaquin Valley, Calif., 1980*

Cultivar or selection	Plant population	Accumulative seed cotton yield and percent harvested: Sept. 3		Sept. 23		Oct. 7[3]	Lint percent	Fiber properties of total crop: UHM	Uniformity	T_1	E_1	Mic.
	Thousands per acre	*Pounds*	*Percent*	*Pounds*	*Percent*	*Pounds*						
Acala SJ-2	33	85	3	1,694	58	2,933	37.7	1.13	48	2.57	8.9	4.18
Acala SJ-5	30	238	10	1,573	65	2,436	38.2	1.13	49	2.90	9.0	4.27
Acala 1517 E1	29	586	23	1,840	72	2,557	37.1	1.15	49	2.61	7.8	4.18
Acala 1517 E2	28	341	13	1,845	72	2,576	37.7	1.14	49	2.57	7.4	4.38
Arizona 7203	33	325	12	2,153	77	2,783	40.4	1.11	45	2.20	7.5	4.38
Arizona 7209	31	80	3	1,818	74	2,460	41.7	1.05	47	2.39	8.3	4.08
Cascot 13-77	36	463	16	2,463	86	2,860	41.3	1.01	45	2.08	6.8	3.85
Cascot 56-77	30	439	17	1,782	71	2,521	39.6	1.03	46	2.02	8.0	3.45
Cascot 58-77	31	604	25	2,184	92	2,254	37.9	1.04	47	2.04	8.6	3.58
Cascot 75-77	34	187	8	1,879	84	2,225	39.2	1.08	45	2.17	7.1	3.20
Cascot BR1	33	504	22	865	89	2,327	39.6	1.02	44	2.02	8.1	4.05
Cascot L-77	34	644	25	2,206	87	2,533	41.3	1.07	46	2.37	8.2	4.03
Coker 304	36	240	9	1,997	73	2,751	38.8	1.13	42	2.42	8.0	3.88
Coker 310	32	293	11	1,985	72	2,739	39.4	1.09	47	2.25	8.3	3.68
Coker 315	30	87	3	1,818	64	2,727	41.3	1.10	46	2.34	8.3	3.83
Coker 3114	37	58	2	1,680	60	2,811	40.8	1.08	47	2.30	8.5	3.85
Coker 80903	31	22	1	1,976	70	2,909	39.7	1.09	45	2.35	8.9	3.58
Delcot 277	24	351	12	2,021	70	2,897	37.7	1.10	49	2.40	8.8	3.88
D&PL 41	32	7	1	1,570	44	2,114	41.1	1.06	46	2.38	8.6	3.08
D&PL 61	36	7	1	1,367	54	2,351	39.1	1.08	46	2.38	11.2	3.07
D&PL 728-326-42	32	216	9	1,673	71	2,363	42.1	.94	47	2.14	8.0	4.25
D&PL 7120	37	10	1	1,457	66	2,218	40.6	1.04	48	2.31	10.7	3.29
D&PL 7124-293	30	63	3	1,542	62	2,497	40.0	1.09	46	2.47	9.6	3.20
Dunn 118	32	102	4	1,932	74	2,654	34.7	1.10	48	2.40	7.4	4.13
Dunn 119	35	112	5	2,063	81	2,443	36.6	1.08	48	2.26	7.8	3.83
Dunn 224	30	131	6	1,760	78	2,262	35.3	1.07	48	2.27	7.9	3.98
Paymaster 303	34	543	18	2,126	70	3,018	38.1	.99	46	2.02	7.8	3.78
Paymaster 792	35	800	28	2,497	87	2,880	36.5	.98	49	2.27	9.4	4.30
Paymaster 4298	28	434	17	2,073	83	2,497	37.4	1.07	47	2.41	7.3	4.37
Paymaster 6018	35	541	19	2,531	88	2,868	39.3	.97	48	2.32	7.9	4.00
Pioneer L77	28	150	6	2,080	79	2,633	37.9	1.01	48	2.19	8.3	3.25
Pioneer PR 68	26	167	7	1,927	82	2,363	38.0	1.02	48	2.34	8.9	3.63
Pioneer PR 80	32	53	2	1,631	66	2,456	39.1	1.00	48	2.26	8.5	3.53
SJV Acala 100	28	5	1	1,416	48	2,977	36.0	1.11	48	2.29	7.8	4.05
SJV Acala 300	31	24	8	1,639	53	3,117	37.7	1.08	48	2.15	8.8	3.98

SJV Acala 550	25	5	1	1,265	52	2,424	36.3	1.11	48	2.34	7.3	4.00
SJV Acala 800	28	7	1	1,702	64	2,431	37.4	1.12	48	2.42	7.4	3.88
Stoneville 506	34	61	2	2,276	80	2,831	38.8	1.09	46	2.25	9.6	3.52
Stoneville 825	31	177	6	2,019	74	2,739	38.1	1.07	46	2.14	8.1	3.75
Stoneville 1688	28	0	0	1,932	61	3,158	37.3	1.13	47	2.32	8.9	3.95
Tamcot CAMD-EE	33	759	35	2,051	94	2,177	40.0	.99	47	2.10	8.0	3.75
Tamcot 21-S	25	95	5	1,384	79	1,757	37.1	1.03	46	2.29	10.5	2.85
Tamcot 37-14	35	836	31	2,039	75	2,739	39.0	.98	47	2.22	9.0	4.03
Weslaco 331-78	29	613	26	2,291	99	2,325	40.0	1.04	46	2.11	8.1	3.85
Weslaco 335-78	34	521	20	2,280	88	2,600	40.4	1.02	47	2.13	7.8	4.05
Weslaco C 14-15-78	33	500	15	3,103	76	3,272	39.8	1.02	48	1.98	7.1	4.40
Weslaco C 23-15-78	34	100	45	2,278	92	2,569	40.2	1.01	47	2.29	7.1	4.52
Weslaco C 24-64-78	37	422	14	2,288	75	3,042	39.4	1.07	47	2.13	8.0	4.25
Weslaco C 25-2-78	32	269	11	1,951	76	2,552	37.6	1.07	47	2.12	7.2	4.23
Weslaco C 27-1-78	33	434	16	2,048	75	2,734	40.0	1.04	46	2.05	8.0	4.10
Weslaco C 28-1-78	35	819	30	2,029	75	2,715	38.8	1.02	46	2.08	7.1	4.13
Weslaco C 30-1-78	32	266	9	2,325	75	3,085	38.4	1.02	48	2.12	8.1	3.98
Weslaco C 32-5-78	33	553	18	2,499	83	3,018	39.2	1.03	45	2.05	7.1	3.88
Weslaco D-3-75	29	371	13	2,415	88	2,761	38.5	1.03	47	2.07	8.2	3.85
Weslaco GH-2-10-75	33	548	22	2,019	79	2,540	38.7	1.01	47	2.02	8.1	3.60
Weslaco GH-8-10-75	37	715	25	2,414	88	2,746	40.1	1.04	47	2.05	8.0	3.93
Weslaco GH-11-9-75	30	911	33	2,460	88	2,787	39.4	1.03	46	2.04	7.7	3.68
X Acala SS gs 2-3	26	057	47	1,995	88	2,262	37.8	.99	50	2.28	7.9	4.85
X Acala SS gs 5-1	33	785	37	1,852	86	2,145	38.7	1.03	49	2.08	7.3	3.73
X Acala SS gs 9-4	34	618	22	2,274	82	2,783	38.8	1.01	48	2.07	8.2	4.75
X Acala SS gs 9-5	32	416	52	2,257	83	2,727	36.5	1.00	49	2.39	7.9	4.93
X Acala SS gs 13-2	31	396	49	2,390	84	2,831	37.2	.99	49	2.27	7.4	4.90
X Acala SS gs 13-3	32	621	25	2,106	84	2,504	38.3	1.01	47	2.20	7.3	4.75
X Acala SS gs 13-4	33	640	26	2,039	85	2,412	37.7	.99	48	2.34	7.8	4.48
X Acala SS gs 15-2	30	897	38	2,128	89	2,387	38.4	1.06	47	2.31	7.8	3.50
X Acala SS gs 15-3	31	964	38	2,143	85	2,516	38.1	1.07	47	2.16	7.6	3.80
X Acala SS gs Chico	31	900	35	2,264	87	2,589	39.5	1.02	49	2.24	8.0	4.65
X Acala SS Cl 1	34	640	21	2,087	70	3,025	35.8	1.11	48	2.55	8.3	4.53
X Acala SS CHRP 1	37	353	52	2,107	81	2,588	33.3	1.02	48	2.23	7.9	4.27
X Acala SS CHRP 2	29	440	56	2,240	88	2,509	34.3	1.02	49	2.38	8.3	4.33
X Acala SS ERG 4	37	702	58	2,628	89	2,954	36.6	1.00	49	2.21	7.1	4.50
X Acala SS ERG 7	34	573	57	2,468	89	2,763	33.4	.96	50	2.28	7.3	4.68
X Acala SS ERG 8	32	767	63	2,642	94	3,000	35.0	1.00	51	2.28	7.8	4.63
X Acala SS Okra 41-7	32	533	17	2,303	75	3,066	35.3	1.07	49	2.55	8.1	4.85
X Acala SS Okra 42-3	31	421	13	2,446	73	3,219	34.3	1.11	48	2.51	8.1	4.55
X Acala SS Okra 43-3	33	555	18	2,424	77	3,142	36.6	1.08	48	2.44	7.5	4.75
X Acala SS Okra 43-7	32	366	12	2,332	77	3,018	34.3	1.08	49	2.54	8.8	4.80
X Acala SS N9Y	29	441	15	2,140	71	3,013	39.0	1.04	49	2.35	8.8	4.45
X Acala SS SB 1	31	071	49	1,791	81	2,206	36.5	1.02	48	2.20	7.9	4.13
X Acala SS SB 2	27	778	32	2,070	84	2,468	35.9	1.02	48	2.21	7.9	4.38
X Acala SS SB 3	32	681	25	2,082	76	2,746	37.5	1.04	48	2.20	7.3	4.23
X Acala SS SB 4	32	309	50	2,259	86	2,630	37.8	1.01	50	2.30	7.9	4.45
X Acala SS SB 5	29	773	37	1,702	82	2,072	35.5	1.04	49	2.26	7.5	3.95
X Acala SS SB 6	29	800	33	1,954	82	2,387	35.8	1.02	50	2.10	7.8	3.93

Table 7.--*Seed cotton yield, maturity responses,*[1] *and fiber property measurements*[2] *of cotton cultivars and selections grown in 20-inch configurations in the San Joaquin Valley, Calif., 1980*--Continued

Cultivar or selection	Plant population	Accumulative seed cotton yield and percent harvested					Lint percent	Fiber properties of total crop				
		Sept. 3		Sept. 23		Oct. 7[3]		UHM	Uniformity	T_1	E_1	Mic.
	Thousands per acre	*Pounds*	*Percent*	*Pounds*	*Percent*	*Pounds*						
X Acala SS SB 8	31	599	25	1,813	76	2,371	35.7	1.05	50	2.24	8.1	4.31
X Acala SS SB 9	30	841	40	1,704	81	2,109	35.9	1.01	49	2.30	7.6	4.12
X Acala SS SB 10	28	1,137	43	2,235	85	2,637	38.1	.98	49	2.22	7.4	4.86
X Acala SS SB 11	30	1,154	45	1,944	82	2,363	35.6	1.03	49	2.32	7.9	4.10
X Acala SS SB 12	32	979	41	1,990	83	2,407	36.2	1.02	48	2.34	7.9	4.20
X Acala SS SB 13	31	647	26	1,919	78	2,456	36.2	1.05	49	2.31	8.8	4.10
X Acala SS 60	31	63	2	1,825	63	2,885	37.4	1.13	46	2.56	8.7	3.28
X Acala SS 78	37	22	7	1,728	55	3,151	40.8	1.14	48	2.61	8.7	3.60
X Acala SS 79	30	364	13	2,252	83	2,698	38.8	1.11	49	2.66	7.3	4.20
X Acala SS 94	33	305	12	1,978	76	2,613	38.6	1.11	46	2.64	7.7	3.57
X Acala SS 95	33	288	12	1,971	85	2,322	39.0	1.10	47	2.57	7.6	3.55
Pima S-5	32	0	0	528	32	[4]2,710	38.3	1.28	46	3.45	8.7	3.65
Pima 80-102	35	0	0	851	41	[4]2,472	34.4	1.31	47	3.27	9.0	3.43
Pima 80-104	30	0	0	1,035	49	[4]2,775	32.5	1.33	46	3.59	8.0	3.15
Means	32	518	20	1,990	76	2,632	37.9	1.06	48	2.32	8.1	4.02

[1]Means of 4 replications for plant population and accumulative yield.
[2]UHM = 2.5 percent span length, inches; Uniformity = U.I., 50 percent span length divided by 2.5 percent span length, percent; T_1 = strength, grams/grex; E_1 = elongation, percent; Mic. = micronaire.
[3]100 percent accumulative yield column.
[4]Total yield on Oct. 24.